A FIRST LESSON IN MODELLING.

BY MRS. F. STEINTHAL.

Before coming to the subject of my paper, I should like to mention that it will only refer to the teaching of modelling to very young pupils—say from five to nine years of age. To older students who wish to begin and pursue this most fascinating of arts, I would recommend Mr. Roscoe Mullins' "Primer of Sculpture" (Cassell and Co.), a little book which is admirably thought out and most clearly expressed.

We must see that all our material is ready before our first lesson, so that we can work without any hindrance when our little pupil arrives. Very good clay can be obtained from the Terra-cotta works, Hele Cross, Torquay, for five shillings a hundredweight. Half that quantity will suffice for our little ones for some time. The tools are very few in number. The best ones every child possesses—namely, his fingers and hands. Mr. Mullins recommends Mr. Dadge, 28, Winchester Road, South Hampstead. Anybody who has learnt Sloyd can copy the tools, if two or three are bought as examples.

We also require a strong board to work on. An old doughing-board serves our purpose very well. A piece of flannel to soak in water and place over the work when the lesson is over completes our outfit.

Perhaps the reader may wonder at this point where the model to be copied is to be found or bought. Models we all possess, and the small pupil need not go out of his own nursery to find one.

Now we have the clay, tools, and board all ready for our first work, and the little one sits down in eager anticipation of the play which he is certain will even excel the delight of the dough and mud games. He looks amused when you ask him for his own shoe, or one of baby's, the older the better, and then ask him to make a clay one, and tell him that, when finished and baked, it can be a present for mother, and hold her flowers.

He takes a piece of clay about the size of a plum between his thumb and finger, and places it on the board, pressing it

down only with the thumb (the clay gets so hard and dry when fingered all over, as children generally love to press it), then takes a second piece, and joins it to the first, and so on, until it is the size of the sole, and about a quarter of an inch thick. (When an article is to be burnt the shrinking must be considered.)

This is smoothed with the thumb until a perfectly flat surface is obtained. Then with a tool the shape of the sole is cut out, looking at the *under part* of the shoe as a guide. Then we want the sides. Take a lump of clay and roll it quickly into the shape of a sausage between both hands. Put it on the board and press flat with the thumb. When thin enough look at the model, and cut out sharply a straight piece—the width of its sides. Moisten the edge of the sole with water, lift up the sides, and carefully press it round the sole, joining it at the back. If the roll does not prove long enough, the pupil need not feel anxious. He must set to work and make a second, and join by pressing both ends together. Now there is a sole with a wall all round it; but alas, no place for the toes; and the little one's face looks very serious when he sees this deformity. He must turn the heel towards him and press the toe part nearer to the sole, leaving the sides erect. There will be two lumps of unnecessary clay on both sides, which must be taken between the finger and thumb of both hands, pressed together, and broken off. Make another very small roll, press, and flatten, and put it where the straps go—of course making a hole in the right side one, and rolling a small button to put on the other. The button must be moistened before being fastened on. The pupil must remember that the shoe is not new, and as he must always be very truthful if he works for Madame Art, he must turn up the toes, and put in two or three little creases baby has made with creeping, so that mother will know, at once, that it is a portrait of her dear little baby's shoe, and will give the artist a kiss for it. Now he has only to make a very little roll to go round the top, and smooth the sides with his thumbs, keeping them for this purpose wet, by rubbing them on a wet sponge, and the shoe is ready. Cut it off the board with a piece of string held in both hands, and let it dry. If a brick kiln is near send it there to bake, or cook will perhaps let it stand in a very hot oven, and as the shoe is small it may be made hard enough to hold water and flowers.

This is quite enough for one lesson, and may possibly extend to two. Remember, if the clay must be touched again, that a wet cloth must be kept over it to keep it soft.

If the little artist shows a natural aptitude for modelling, and a pleasure in his work, boots, dolls' cradles, dolls' pumps, horses, and all kinds of toys might be copied. After this it would be wise to begin more serious work. For this I would recommend in order, David's nose, eye, and mouth, by Michael Angelo, casts of which can be obtained in the south from Brucciani, Covent Garden, and in the North from Alberti, 1, Oxford Road, Manchester. Both these firms sell excellent models of animals' heads, 6d. each, which are a great joy and delight to the boys and girls.

HEREDITY: ITS INFLUENCE ON THE PHYSICAL AND MORAL TRAINING OF CHILDREN.

By A. H. Tubby, M.S., M.B. Lond., F.R.C.S.

What is Heredity? Häckel defined it as simple continuity of growth. This definition might be considered as a play upon words, but it is more than this, and such a definition, rightly applied, points to the only path which can lead to the comprehension of Heredity. Certain small organisms which are only composed of a single cell, millions of similar cells being found in our own bodies, increase by the simple process of fission. Each individual attains a certain size, and then divides into two parts, which are exactly alike in structure, so that it is impossible to decide whether one is younger or older than the other. Hence, in a certain sense, these organisms possess immortality; they can, it is true, be destroyed, but if protected from a violent death, they would live on indefinitely, and would only from time to time reduce the size of their overgrown bodies by division. From the mode of increase of a number of these small cells, we can, to a certain extent, understand why the offspring, being, in fact, a part of its parent, must therefore resemble it. But when we pass on to the higher organism we find ourselves baffled, our theories at fault.

Suffice it to say that Heredity is an inevitable law working by results, the hidden operations of which are veiled from our view. The habits and mode of life of animals are largely fixed by instinct, and there can, I think, be no dispute, that instinct passes by hereditary transmission: "the ant inherits the instincts of the ant, the bee those of the bee, the beaver those of the beaver," as distinctly as each inherits the outward shape and inward structure of its predecessors. A young duck thrown into the water commences to swim at once. Sixty years ago, Knight made some experiments with some pointer pups. The first day, on taking them into a field, one of the pups stood trembling with